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NOMENCLATURAL PROPOSAL PHYTOSOCIOLOGICAL NOMENCLATURE

Proposals (45–47) to conserve the name *Diantho deltoidis-Armerietum elongatae* Krausch ex Pötsch 1962 as a *nomen conservandum* and to reject two *nomina dubia* in the class *Koelerio-Corynephoretea*

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Abstract

The ongoing syntaxonomic revision of the class *Koelerio-Corynephoretea* in their entire range led to the need for nomenclatural decisions to ensure nomenclatural stability and clarity. Specifically, based on Article 52 ICPN, we propose the conservation of the widely used name *Diantho deltoidis-Armerietum elongatae* against the older names *Armerio elongatae-Rumicetum tenuifolii* and *Armerio-Festucetum*:

(45) *Diantho deltoidis-Armerietum elongatae* Krausch ex Pötsch 1962 nom. cons. propos.
Typus: Pötsch (1962: table 12, relevé 5) [Lectotypus, selected by Moravec (1967: 166)]

(=) *Armerio elongatae-Rumicetum tenuifolii* Tüxen 1951
Typus: Neotypus selected here (see below)

(=) *Armerio elongatae-Festucetum* Hohenester 1960
Typus: Dengler et al. (2003: p. 604) [Neotypus, selected by Dengler in Dengler et al. (2003): 604]

Moreover, based on Articles 36 and 37 ICPN, we propose to reject the following ambiguous and/or dubious names:

(46) *Festuco ovinae-Thymetum angustifolii* Tüxen 1937 nom. dub. propos.
Typus: Gregor (2001: 8) [Neotypus (erroneously called Lectotypus), selected by Gregor (2001)]

(47) *Corynephoro canescentis-Caricetum arenariae* Regel 1928 nom. dub. propos.
Typus: Regel (1928: table 4, relevé 18) [Holotypus]

Syntaxonomic reference: Berg et al. (2004), with nomenclatural updates in Dembicz et al. (2025).

Abbreviations: CCCN = Committee for Change and Conservation of Names of the Group of Phytosociological Nomenclature; ICPN = International Code of Phytosociological Nomenclature, 4th edition (Theurillat et al. 2021).

Keywords

Armerio elongatae-Rumicetum tenuifolii, *Diantho deltoidis-Armerietum elongatae*, dry grassland, Europe, *Corynephoro canescentis-Caricetum arenariae*, *Festuco ovinae-Thymetum angustifolii*, *Koelerio-Corynephoretea*, *nomen conservandum*, phytosociological nomenclature, sand grassland, syntaxonomy, vegetation classification

PENSOFT

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Introduction

The first author has studied the syntaxonomy of the class *Koelerio-Corynephoretea* (sandy, dry grasslands of temperate Europe) for decades throughout its entire geographic range, with a special focus on the Pleistocene lowlands around the Baltic Sea (Dengler 1994; Kratzert and Dengler 1999; Dengler 2004; Drews and Dengler 2004; Marquardt et al. 2004; Boch and Dengler 2006; Löbel and Dengler 2008; Dembicz et al. 2025). This research has led to numerous proposals and typifications aimed at clarifying and stabilizing syntaxon names (Dengler et al. 2003; Dembicz et al. 2025). However, a recent paper on the classification of the dry grasslands of the Lesser Polish Upland (Dembicz et al. 2025) suggested that there are still some open issues to be addressed.

With this paper, following two previous nomenclatural proposals on European dry grassland syntaxa (Dengler and Willner 2023; Dengler et al. 2024), we seek the decisions of the Committee for Change and Conservation of Names (CCCN) of the Group of Phytosociological Nomenclature (see Willner et al. 2024), in accordance with the International Code of Phytosociological Nomenclature (ICPN; Theurillat et al. 2021). Specifically, we ask for the conservation of the name *Diantho deltoidis-Armerietum elongatae* Krausch ex Pötsch 1962 and the rejection of the dubious and/or ambiguous names *Corynephoro canescentis-Caricetum arenariae* Regel 1928 and *Festuco ovinae-Thymetum angustifolii* Tüxen 1937.

Diantho deltoidis-Armerietum elongatae

The *Diantho deltoidis-Armerietum elongatae* is the most widely distributed and most frequent association of the alliance *Armerion elongatae* (order *Trifolio arvensis-Festucetalia ovinae*, class *Koelerio-Corynephoretea*). At the same time, it is the holotype of this alliance. It occurs in NE Germany (Krausch 1968; Dengler 1994, 2004; Kratzert and Dengler 1999), some sand areas with subcontinental climate in NW Germany (Marquardt et al. 2004) and S Germany (Oberdorfer 1993), the Polish lowlands (Głowacki 1988; Brzeg and Wojterska 1996; Matuszkiewicz 2008; Kutyna et al. 2012; Dembicz et al. 2025), the Baltic States (Jermacāne and Laiviņš 2001), probably Denmark and Southern Sweden (Dierßen and Dierßen 1996; Löbel and Dengler 2008; I. Dembicz et al. in prep.). It is a meso-xeric sand grassland of the subcontinental parts of nemoral and hemiboreal Europe. Compared to the second widespread association of the alliance, the *Sileno otitae-Festucetum trachyphyllae*, it is differentiated by inhabiting sands with lower soil pH, typically between 5 and 6 (measured in H_2O), compared to 6 to 7.5 for the former (Dengler 2004; Kratzert and Dengler 1999; Dembicz et al. 2025)

The name *Diantho deltoidis-Armerietum elongatae*, was described from Brandenburg in NE Germany (Pötsch 1962; see also Krausch 1968). It is very widely applied for this community throughout its distributional range (Pott 1995; Dierßen and Dierßen 1996; Kratzert and Dengler 1999; Jermacāne and Laiviņš 2001; Passarge 2002; Rennwald et al. 2002; Berg et al. 2004; Marquardt et al. 2004; Löbel and Dengler 2008; Dembicz et al. 2025). Sometimes the same name is also given with the wrong authority "Krausch 1959" (Krausch 1968; Dierßen et al. 1988; Schubert et al. 1995; Preising et al. 1997; Matuszkiewicz 2008; Kutyna et al. 2012). However, "*Diantho deltoidis-Armerietum elongatae* Krausch 1959" is a phantom name. In the only two publications of Krausch from the year 1959 he used the name "*Diantho deltoidis-Festucetum*", which in Krausch (1959a) was ineffectively published (Art. 1 ICPN) and in Krausch (1959b) invalid (Art. 7 ICPN).

By contrast, there are two older validly described association names largely matching the content of the *Diantho-Armerietum*, the *Armerio elongatae-Rumicetum tenuifolii* Tx. 1951 [Tüxen 1951: 161] described from Southern Sweden and the *Armerio-Festucetum* Hohenester 1960 [Hohenester 1960: 45] described from Franconia, Southern Germany. The first one has practically never been taken up in the phytosociological literature, and the second one much more rarely and then typically in a wider sense, also comprising the *Sileno otitae-Festucetum trachyphyllae* Libbert 1933 mut. Dembicz et al. 2025 nom. invers. (e.g. Oberdorfer 1993). In the Polish lowlands, the distributional centre of the association, we did not find a single study using the name *Armerio-Festucetum*. Sometimes the name *Armerio-Festucetum* has even been applied for the *Sileno otitae-Festucetum trachyphyllae* as opposed to the *Diantho deltoidis-Armerietum elongatae* (Pott 1995; Schubert et al. 1995), which is a misapplication of this name following the neotypification by Dengler et al. (2003).

To ensure nomenclatural stability we thus formally propose to conserve the younger name *Diantho deltoidis-Armerietum elongatae* Krausch ex Pötsch 1962 against the older names *Armerio elongatae-Rumicetum tenuifolii* Tx. 1951 (for neotype, see Appendix 1) and *Armerio-Festucetum* Hohenester 1960. The same proposal has already been formulated multiple times, but without a formal application to the CCCN (e.g. Rennwald et al. 2002: pp. 330–331; Dengler 2004; Löbel and Dengler 2008; Dembicz et al. 2025).

Festuco ovinae-Thymetum angustifolii

The name *Festuco ovinae-Thymetum angustifolii*, published by Tüxen (1937: 56) based on a constancy table, could in principle also have priority against the *Diantho deltoidis-Armerietum elongatae*. We consider the *Festuco-Thymetum* a *nomen dubium* (Art. 37 ICPN) because, according to current syntaxonomy (e.g. Dengler 2004), it would be crucial for syntaxonomic placement to know which micrtaxon of *Festuca ovina* aggr. was the matrix species of the

stands. Tüxen (1937) gave "*Festuca ovina* subsp. *vulgaris*", which in NW Germany could correspond to any of the following four present-day taxa: *F. ovina*, *F. guestfalica*, *F. lemanii*, *F. stricta* subsp. *trachyphylla* (see Dengler 1996, 1998). The neotypification by Gregor (2001) did not solve the issue as the author himself acknowledges that it is impossible to assign the name "*Festuca ovina*" by Tüxen to a present-day species without ambiguity.

Generally, the name *Festuco ovinae-Thymetum angustifolii* has rarely been used (for an exception, see Kornaś 1957: with the epitheton "*serpylli*" instead of "*angustifolii*"). Moreover, some authors used the association name even for an association dominated by *F. filiformis* (e.g. Weeda et al. in Schaminée et al. 1996: 93 et seq.), despite Tüxen (1937) generally differentiated this *Festuca* species, but did not mention it in the protologue. This would render the *Festuco-Thymetum* also a *nomen ambiguum* as this would mean a usage excluding the type (Art. 36 ICPN).

Thus, we herewith propose to reject the *Festuco ovinae-Thymetum angustifolii* Tx. 1937 both as *nomen dubium* and *nomen ambiguum*. If the CCCN should not follow this suggestion, we recommend conserving the *Diantho deltoidis-Armerietum elongatae* against it instead.

Corynephoro canescentis-Caricetum arenariae

The *Cetrario aculeatae-Corynephoretum canescentis* Steffen 1931 mut. Dembicz et al. 2025 nom. invers. is the most widely distributed and most frequent association of the alliance *Corynephorion canescentis* (order *Corynephoretalia canescentis*, class *Koelerio-Corynephoretea*). It is a pioneer sand grassland on acidic and very nutrient-poor sands, often on inland and coastal dunes, in suboceanic to subcontinental regions of temperate Europe (see Dengler et al. 2003). The herb layer usually has very low cover and often does not contain many more species than just *Corynephorus canescens*, while the bryophyte and lichen cover can range from close to zero to very high and the richness of non-vascular taxa often exceeds that of the vascular plants (Kratzert and Dengler 1999; Dengler 2004; Dembicz et al. 2025).

However, there is the older name *Corynephoro canescentis-Caricetum arenariae* Regel 1928, which could be considered an older syntaxonomic synonym that should have priority over the *Cetrario-Corynephoretum*. However, in the only relevé of the protologue (and thus the holotype, see Appendix 1) of the association name *Corynephoro canescentis-Caricetum arenariae* the much covering non-vascular taxa have not been identified. Thus, it is not possible to decide whether the stand belonged to the present-day association *Cetrario-Corynephoretum* or *Caricetum arenariae* Christiansen 1927. Both are part of the *Corynephorion canescentis*, often occur side by side and are mainly differentiated by the bryophyte and lichen species, while *Carex arenaria* and *Corynephorus canescens* can occur in both associations (Dengler 2004). We are not aware of any publication, and certainly not a more recent one, that adopted the name *Corynephoro canescentis-Caricetum arenariae* Regel 1928.

While some authors (e.g. Passarge 2002) proposed to conserve the relatively widely used, but invalid name "*Spergulo morisonii-Corynephoretum canescentis* Tx. (1928) 1955" (Kornaś 1957; Głowacki 1988), this is not possible because only validly published names can be conserved (Art. 52 ICPN). However, Tüxen (1955) did not provide a valid association description according to Art. 7 ICPN. In principle, one could apply to conserve the *Spergulo-Corynephoretum* (Tx. 1928) Passarge 1960, which was validly published. However, the association name with these authorities has rarely been used except by Passarge (1960, 2002) himself.

In conclusion, we propose rejecting the name *Corynephoro canescentis-Caricetum arenariae* Regel 1928 as a *nomen dubium* (Art. 37 ICPN). If the CCCN should not follow this suggestion, we recommend conserving the *Cetrario aculeatae-Corynephoretum canescentis* against it instead.

Author contributions

JD conceived the idea of this paper and drafted the manuscript, while ID added the Polish perspective and revised the text.

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Appendix 1. Nomenclatural types of associations

Taxon names are given as in the source but assigned to the present-day taxon in brackets.

***Armerio elongatae-Rumicetum tenuifolii* Tx. 1951**

Protologue: Tüxen (1951; p. 161) (only a synoptic table based on relevés from various localities in Southern Sweden, including Öland)
Original form of the name: *Armeria elongata-Rumex tenuifolius*-Ass.
Note: *Rumex tenuifolius* is nowadays considered as subspecies of *R. acetosella* (Euro+Med 2025).
Neotypus hoc loco (relevé F48 from Löbel 2002):
Date: summer 2001; locality: Southern Öland, Sweden; 56.58745°N, 16.41200°E; plot size: 4 m; cover scale: 9-step Braun-Blanquet scale.
Species composition herb layer: *Achillea millefolium* subsp. *millefolium* 2a, *Agrostis capillaris* 2b, *Armeria maritima* subsp. *elongata* 2a, *Artemisia campestris* subsp. *campestris* r, *Cerastium semidecandrum* 1, *Cerastium fontanum* subsp. *vulgare* 1, *Dianthus deltoides* 2m, *Festuca ovina* 2a, *Galium verum* 2a, *Luzula campestris* subsp. *campestris* 1, *Plantago lanceolata* subsp. *lanceolata* +, *Poa pratensis* 1, *Pulsatilla pratensis* subsp. *pratensis* r, *Rumex acetosella* 1, *Sedum acre* 2b, *Stellaria graminea* 1, *Thymus serpyllum* subsp. *serpyllum* 2a, *Trifolium arvense* +, *Trifolium repens* subsp. *repens* r.
Species composition moss layer: *Brachythecium albicans* 2m, *Ceratodon purpureus* 2m, *Cladonia rangiformis* 2m, *Dicranum scoparium* 2a, *Hypnum cupressiforme* var. *lacunosum* 2b, *Peltigera canina* 1, *Rhytidiadelphus squarrosus* 2a, *Thuidium abietinum* (*Abietinella abietina*) 2m.

***Corynephoro canescentis-Caricetum arenariae* Regel 1928 nom. dub. propos.**

Protologue: Regel (1928: pp. 268 and 282)
Original form of the name: *Corynephoretum canescentis-Caricetum arenariae*
Holotypus (the protologue contains only one relevé):
Date: 31.07.1926; locality: sandy plain near Haff, Schwarzort (now: Juodkrantė), Lithuania; plot size: unknown; cover scale: "Deckungsgrad" (possibly 7-step cover abundance scale of Braun-Blanquet).
Species composition herb layer: *Astragalus arenarius* 3, *Carex arenaria* 4–5, *Calamagrostis epigejos* 1, *Corynephorus canescens* 4–5, *Hieracium umbellatum* 2, *Jasione montana* 1.
Species composition moss layer: *Ceratodon purpureus* +, *Musci* spp. (*Bryophyta* spp.) and *Lichenes* spp. 4.

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